

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Application of: **Alan FARER, et al.**

Application No.:	<b>10/520,561</b>	Examiner:	<b>YU, Gina C.</b>
Date Filed:	<b>January 7, 2005</b>	Group:	<b>1617</b>
Attorney Docket:	<b>3975.038</b>	Conf. No.:	<b>5265</b>

For: **MOISTURE-PROOF MASCARA COMPOSITION**

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**DECLARATION UNDER 37 C.F.R. §1.132 BY MS. YELENA LOGINOVA**

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Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

I, Yelena Loginova, do declare:

1. I am a co-inventors of the subject matter claimed in the above-captioned application ("the Application").

2. I have reviewed the non-final Office Action mailed March 12, 2008 (hereinafter "Office Action") and the assertions therein, as well as the cited references. In the Office Action, claims 1, 3 & 4 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over WIPO Publication WO99/20230 filed by Hurschmann *et al.* (hereinafter "Hurschmann" OR "D1"). In the Office Action, claim 6 was rejected under 35 U.S.C. § 103(a) as being obvious over Hurschmann in view of U.S. Patent No. 5,800,825 issued to McMullen.

The claimed mascara composition is set forth in claim 1, which recites:

Claim 1. (previously presented) A moisture-proof mascara composition, characterized by a stable colloidal complex comprising

0.1 to 10 % by weight of a water-soluble polymer selected from among polyvinylpyrrolidone, vinyl acetate/vinyl pyrrolidone copolymers and mixtures thereof,  
0.5 to 10 % by weight of stearic acid and  
1 to 40 % by weight of a wax or wax mixture,  
and manufactured by adding the water-soluble polymer or copolymer into the oil phase consisting of the melted wax or wax mixture, stearic acid and optionally an emulsifier, until a stable colloidal complex is formed, and emulsifying the said complex in homogeneous form with an aqueous phase.

It is important to note that the claims are drawn to an oil phase that consists of the melted wax or wax mixture, stearic acid and optionally an emulsifier. *The water-soluble polymer or copolymer is mixed into the melted oil phase until a stable colloidal complex is formed.* After forming the stable water-soluble (co)polymer/oil phase colloidal complex, the stable water-soluble (co)polymer/oil phase colloidal complex is emulsified with an aqueous phase.

In contrast, Hurschmann does not disclose this method of combining the ingredients and Hurschmann does not include any mention of using a melted oil phase to form the "mascara" disclosed therein, *see* Hurschmann, paragraph bridging pages 5-6. As acknowledged by the Examiner, Hurschmann's method of making a "mascara" is different from that required by the instant product-by-process claims, *see* Office Action, page 3.

In the Office Action, the Examiner states that:

[T]he final emulsion product of Hurschmann contains a mixture of PVP and wax also [*i.e.*, like the claimed mascara]: the Hurschmann mascara contains the same ingredients in the same amounts as the present invention. Without a showing of unexpected result of the present invention over the Formulation R2 of the Hurschmann patent, which is the closest prior art, Examiner finds the present invention *prima facie* obvious.  
Office Action, page 4.

In order to demonstrate that the claimed mascara product produced by the claimed method produces a mascara with moisture-proof properties superior to those of mascaras made using the closest cited art (Hurschmann as identified on page 4 of the Office Action), I have conducted comparative experiments comparing a mascara produced using the claimed method and a mascara produced using Formulation R2 from Hurschmann.

The methodology and results follow:

*a) Sample Preparation*

Two samples were prepared: Sample 1 or "Coty K 108" (Specification, Example 1) and Sample D1 (Hurschmann, Formulation R2).

Sample 1 was prepared in a manner consistent with claim 1 and example 1 of the instant application. Of particular note, the PVP was added to oil phase A, which included molten wax and stearic acid.

Hurschmann D1 was prepared according to the methodology set forth in the Hurschmann patent, *see* Hurschmann, paragraph bridging pages 5-6. Thus, all water soluble ingredients of Formulation R2, excluding the PVA/PVP copolymer, were mixed in one vessel based on general emulsion technology. Then the remaining oil soluble ingredients (waxes and oils) were combined in another vessel and worked into the aqueous phase. For comparison with the present application, two different Hurschmann D1 samples were evaluated. In the first, Hurschmann D1.A., the PVA/PVP copolymer was dissolved in the aqueous phase, followed by addition of the oil soluble ingredients. In the second, Hurschmann D1.B, the PVA/PVP copolymer was combined with the wax and stearic acid prior to combining them with the aqueous phase, which would be the procedure of the present application used for the preparation of Hurschmann R2 formulation.

Although Hurschmann D1.A. is most consistent with conventional mixing techniques used in the cosmetic arts at the time the application was filed, both Hurschmann D1.A and D1.B were prepared so that they could be properly contrasted from the claimed product. Because Hurschmann does not disclose any heating or cooling parameters, both phases were heated to 80-85 °C and mixed until uniform, and then combined. The pigment phase was added to the water phase prior to combining the oil and water phases. The combined product was then cooled down to 30 °C.

*b) Tape adhesion test*

A tape adhesion test was performed to assess the adhesion of the two mascara samples to a substrate after humidity exposure. The test described below is consistent with the Tape-and-Peel Test promulgated by the American Society for Testing and Materials, Designation D3359-97. Accordingly, a film of each sample was applied to a glass slide (regular glass 7 x 4 x 1.8

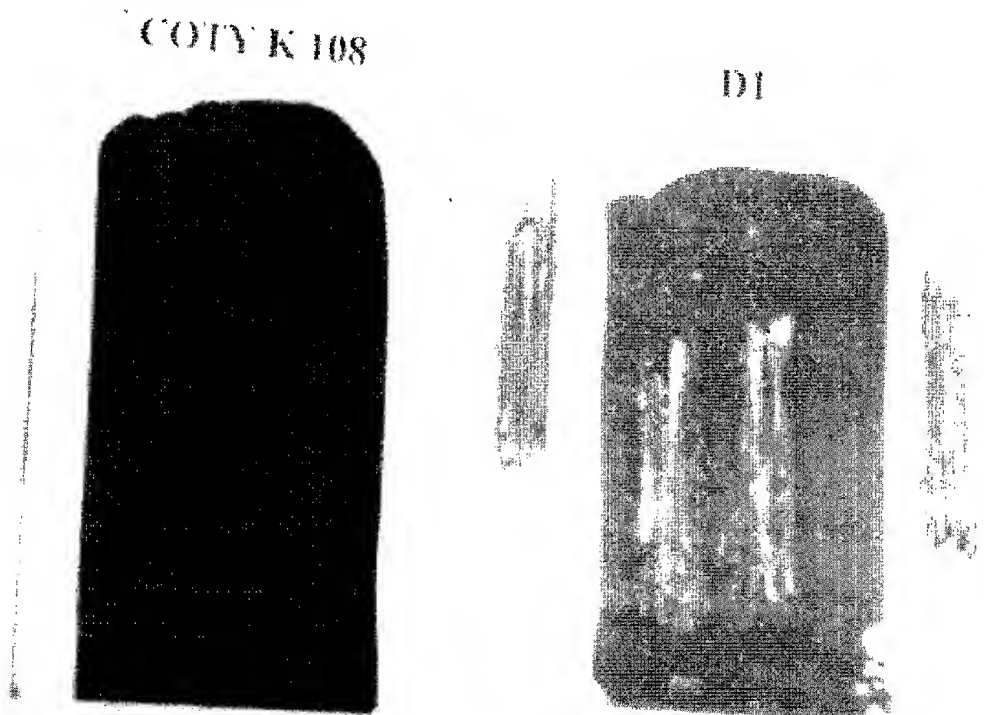
inch, Cherokee Glass Company, NJ) using a 6-mil wet film drawdown bar (film applicator) manufactured by Byk Gardner.

Following application of the film, the films applied to the glass slides were air dried at room temperature for 48 hours. The result was a 3 mil non-transferable film of each mascara Sample. The slides were subsequently placed into a Humidity chamber (Percival Scientific, Inc.) at 37 °C and 80 % humidity for 1 hour. The slides were removed from the humidity chamber and cooled down for 1 hour. A 3" sample of pressure sensitive adhesive tape (manufactured by Permaccel) was applied and pressed onto each Sample and immediately removed.

The final step in the test is visual assessment of the coating removed from the specimen. Adhesion is considered to be adequate if the mascara film is not pulled off by the tape when it is removed.

Each piece of tape was measure (A) before application to the Sample, and (B) after being removed from the Sample.

*c) Results*

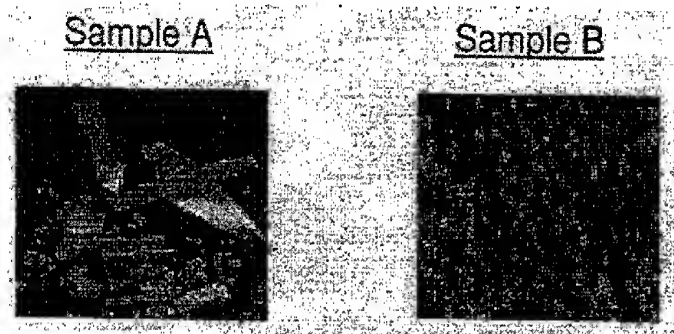


Reference #	Tare Weight of Tape (grams)	Post-Test Weight of Tape (grams)	Weight of Mascara Removed (grams)
Example 1 (Spec. pg. 7-8)	0.274	0.274	0.000
Hurschmann D1.A (Example R2A)	0.281	0.336	0.055
Hurschmann D1.B (Example R2A)	0.271	0.310	0.039

As is evident from the photos and the data provided, adhesion was far superior for Example 1 than for Hurschmann D1.A, where the Hurschmann methodology was followed. In addition, while no mascara was removed from Example 1, 0.055 grams of mascara were removed using the Hurschmann D1.A. formulation (PVA/PVP copolymer in water). It is my estimate that 0.055 grams represents at least 35% of the mascara covered by the tape (3 mil thick film x 3" long strip of tape x 1" width of tape = 0.147 cm<sup>3</sup>) and 0.039 grams represents at least 25% of the mascara covered by the tape. These test results clearly demonstrate that, in comparison to the closest cited reference (as indicated by the Examiner at Office Action, page 4), the product-by-process claims of the instant application produce a mascara with unexpectedly superior moisture-proof adhesion properties.

3. The root cause of these different test results described above are believed to be the result of different crystal structures of PVP polymers exposed to the claimed process and those disclosed in Hurschmann and other conventional mascara processing methods. The specification describes that creating the colloidal complex, *i.e.* mixing PVP with the oil phase rather than directly with the aqueous phase, produces significant changes in the PVP crystals that are recovered once the water evaporates, *see* Specification, paragraph [0010]. Applicants believe that this difference a direct result of the process of the claims and that the difference helps explain the improved moisture-resistance.

In order to confirm this, a study was conducted evaluating PVP crystals resulting from a 4% mixture of PVP in wax and a separate mixture of 4% PVP in water. First, after evaporation of the water, the PVP crystals were 5 wt-% of the PVP/wax mixture, while the PVP crystals were only 4 wt-% of the PVP/water mixture. This demonstrates that the wax has some impact on the PVP crystal structure, *see* Specification, paragraph [0010]. As discussed in the specification, the resulting crystals are also different. The PVP/wax crystals are "large shiny, slightly yellow, harder crystals," while the PVP/water crystals were "very small." Pictures of representative crystals are shown as Sample A (PVP/wax) and Sample B (PVP/water) below.



In order to form the mascara described in Hurschmann, all of the mascara ingredients are simultaneously or sequentially "worked into a suitable *water-containing* carrier." In contrast, the mascara composition set forth in the claims, requires (i) formation of an oil phase consisting of a melted wax or wax mixture, stearic acid and optionally an emulsifier, (ii) formation of a stable colloidal complex by thoroughly mixing the water-soluble polymer with the oil phase, and (iii) finally, emulsifying the colloidal complex in homogeneous form with an aqueous phase. As described in the application, this results in a mascara complex with twice the moisture-resistance found in conventional PVP-containing mascara, such as that which could be produced using Hurschmann. The specification, and the accompanying pictures, outline physical differences in the PVP crystals that result from the claimed PVP/wax mixtures versus the PVP/water mixtures disclosed in Hurschmann. These differences help demonstrate that the product produced by the process set forth in the claims is different from that which is disclosed or suggested by Hurschmann.

The combination of all of this data provides convincing evidence that the claimed method produces a different mascara with different properties that the mascara of the closest prior art, Hurschmann.

4. In conclusion, it is my opinion that the above test results clearly demonstrate that neither Hurschmann nor any other cited reference, whether alone or in combination, disclose or suggest the claimed moisture-proof mascara. Furthermore, the differences in process and end product between Hurschmann and the claims of the Application are neither disclosed nor suggested by Hurschmann or any other cited reference, whether alone or in combination.

5. I further state that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with my knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 8/8/08

Yelena Loginova  
Ms. Yelena Loginova